Release notes for ENDF/B Development n-053_I_129 evaluation

April 26, 2017

- **checkr** Warnings:

  1. A previous error halted parsing of the current section
     MAT=5331, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     263 TO     335
     ```

- **checkr** Errors:

  1. A variable is outside the allowed ENDF range
     MAT=5331, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 1, MT=451
         MOD =     1 OUT OF RANGE     0 -     0          RECORD NUMBER     263
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5331, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY               RECORD NUMBER     337
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5331, MF= 3, MT= 1 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 3, MT=  1
         SECTION  3/  1 NOT IN DIRECTORY               RECORD NUMBER     643
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5331, MF= 3, MT= 2 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 3, MT=  2
         SECTION  3/  2 NOT IN DIRECTORY               RECORD NUMBER     674
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5331, MF= 3, MT= 4 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 3, MT=  4
         SECTION  3/  4 NOT IN DIRECTORY               RECORD NUMBER     703
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5331, MF= 3, MT= 16 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 16
         SECTION  3/ 16 NOT IN DIRECTORY               RECORD NUMBER     724
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=5331, MF= 3, MT= 17 (0): Directory (b)

1

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 17
           SECTION   3/ 17 NOT IN DIRECTORY                    RECORD NUMBER      734
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=5331, MF= 3, MT= 22 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 22
           SECTION   3/ 22 NOT IN DIRECTORY                    RECORD NUMBER      740
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=5331, MF= 3, MT= 28 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 28
           SECTION   3/ 28 NOT IN DIRECTORY                    RECORD NUMBER      754
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 32 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 32
           SECTION   3/ 32 NOT IN DIRECTORY                    RECORD NUMBER      766
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 33 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 33
           SECTION   3/ 33 NOT IN DIRECTORY                    RECORD NUMBER      774
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 51 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 51
           SECTION   3/ 51 NOT IN DIRECTORY                    RECORD NUMBER      782
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 52 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 52
           SECTION   3/ 52 NOT IN DIRECTORY                    RECORD NUMBER      803
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 53 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 53
           SECTION   3/ 53 NOT IN DIRECTORY                    RECORD NUMBER      821
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 54
         SECTION  3/ 54 NOT IN DIRECTORY                 RECORD NUMBER      839
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 55
         SECTION  3/ 55 NOT IN DIRECTORY                 RECORD NUMBER      856
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 56
         SECTION  3/ 56 NOT IN DIRECTORY                 RECORD NUMBER      872
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 57
         SECTION  3/ 57 NOT IN DIRECTORY                 RECORD NUMBER      888
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 58 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 58
         SECTION  3/ 58 NOT IN DIRECTORY                 RECORD NUMBER      904
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 59 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 59
         SECTION  3/ 59 NOT IN DIRECTORY                 RECORD NUMBER      919
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 60 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 60
         SECTION  3/ 60 NOT IN DIRECTORY                 RECORD NUMBER      934
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 61 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 61
         SECTION  3/ 61 NOT IN DIRECTORY                 RECORD NUMBER      948
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 62 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 62
     SECTION  3/ 62 NOT IN DIRECTORY                RECORD NUMBER    961
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 63 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 63
     SECTION  3/ 63 NOT IN DIRECTORY                RECORD NUMBER    974
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 64 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 64
     SECTION  3/ 64 NOT IN DIRECTORY                RECORD NUMBER    987
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 65 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 65
     SECTION  3/ 65 NOT IN DIRECTORY                RECORD NUMBER    999
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 66 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 66
     SECTION  3/ 66 NOT IN DIRECTORY                RECORD NUMBER    1011
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 67 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 67
     SECTION  3/ 67 NOT IN DIRECTORY                RECORD NUMBER    1022
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 68 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 68
     SECTION  3/ 68 NOT IN DIRECTORY                RECORD NUMBER    1033
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5331, MF= 3, MT= 91
     SECTION  3/ 91 NOT IN DIRECTORY                RECORD NUMBER    1044
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT=102 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT=102
         SECTION  3/102 NOT IN DIRECTORY                  RECORD NUMBER    1054
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT=103 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT=103
         SECTION  3/103 NOT IN DIRECTORY                  RECORD NUMBER    1078
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT=104 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT=104
         SECTION  3/104 NOT IN DIRECTORY                  RECORD NUMBER    1093
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT=105 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT=105
         SECTION  3/105 NOT IN DIRECTORY                  RECORD NUMBER    1106
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 3, MT=107 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 3, MT=107
         SECTION  3/107 NOT IN DIRECTORY                  RECORD NUMBER    1117
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 2 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT=  2
         SECTION  4/  2 NOT IN DIRECTORY                  RECORD NUMBER    1134
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 16
         SECTION  4/ 16 NOT IN DIRECTORY                  RECORD NUMBER    1332
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 17
         SECTION  4/ 17 NOT IN DIRECTORY                  RECORD NUMBER    1343
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 22 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 22
         SECTION  4/ 22 NOT IN DIRECTORY                    RECORD NUMBER    1354
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 28 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 28
         SECTION  4/ 28 NOT IN DIRECTORY                    RECORD NUMBER    1365
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 32 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 32
         SECTION  4/ 32 NOT IN DIRECTORY                    RECORD NUMBER    1376
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 33 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 33
         SECTION  4/ 33 NOT IN DIRECTORY                    RECORD NUMBER    1387
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 51
         SECTION  4/ 51 NOT IN DIRECTORY                    RECORD NUMBER    1398
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 52
         SECTION  4/ 52 NOT IN DIRECTORY                    RECORD NUMBER    1426
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 53
         SECTION  4/ 53 NOT IN DIRECTORY                    RECORD NUMBER    1454
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 54
         SECTION  4/ 54 NOT IN DIRECTORY                    RECORD NUMBER    1482
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 55 (0): Directory (b)

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```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 55
          SECTION  4/ 55 NOT IN DIRECTORY                    RECORD NUMBER    1510
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 56 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 56
          SECTION  4/ 56 NOT IN DIRECTORY                    RECORD NUMBER    1537
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 57 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 57
          SECTION  4/ 57 NOT IN DIRECTORY                    RECORD NUMBER    1564
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 58 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 58
          SECTION  4/ 58 NOT IN DIRECTORY                    RECORD NUMBER    1591
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 59 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 59
          SECTION  4/ 59 NOT IN DIRECTORY                    RECORD NUMBER    1618
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 60 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 60
          SECTION  4/ 60 NOT IN DIRECTORY                    RECORD NUMBER    1645
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 61 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 61
          SECTION  4/ 61 NOT IN DIRECTORY                    RECORD NUMBER    1669
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 62 (0): Directory (b)

```
       ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 62
          SECTION  4/ 62 NOT IN DIRECTORY                    RECORD NUMBER    1693
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 63 (0): Directory (b)

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```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 63
        SECTION  4/ 63 NOT IN DIRECTORY                 RECORD NUMBER    1717
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 64 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 64
        SECTION  4/ 64 NOT IN DIRECTORY                 RECORD NUMBER    1741
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 65 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 65
        SECTION  4/ 65 NOT IN DIRECTORY                 RECORD NUMBER    1765
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 66 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 66
        SECTION  4/ 66 NOT IN DIRECTORY                 RECORD NUMBER    1789
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 67 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 67
        SECTION  4/ 67 NOT IN DIRECTORY                 RECORD NUMBER    1813
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 68 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 68
        SECTION  4/ 68 NOT IN DIRECTORY                 RECORD NUMBER    1837
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 4, MT= 91 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 4, MT= 91
        SECTION  4/ 91 NOT IN DIRECTORY                 RECORD NUMBER    1861
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 16 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 16
        SECTION  5/ 16 NOT IN DIRECTORY                 RECORD NUMBER    1886
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 17 (0): Directory (b)

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```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 17
        SECTION  5/ 17 NOT IN DIRECTORY                RECORD NUMBER    1946
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 22 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 22
        SECTION  5/ 22 NOT IN DIRECTORY                RECORD NUMBER    1977
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 28 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 28
        SECTION  5/ 28 NOT IN DIRECTORY                RECORD NUMBER    2183
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 32 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 32
        SECTION  5/ 32 NOT IN DIRECTORY                RECORD NUMBER    2314
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 33 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 33
        SECTION  5/ 33 NOT IN DIRECTORY                RECORD NUMBER    2358
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF= 5, MT= 91 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF= 5, MT= 91
        SECTION  5/ 91 NOT IN DIRECTORY                RECORD NUMBER    2396
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF=33, MT= 2 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF=33, MT=  2
        SECTION 33/  2 NOT IN DIRECTORY                RECORD NUMBER    2523
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF=33, MT= 4 (0): Directory (b)

```
     ERROR(S) FOUND IN MAT=5331, MF=33, MT=  4
        SECTION 33/  4 NOT IN DIRECTORY                RECORD NUMBER    2613
```

71. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF=33, MT= 16 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF=33, MT= 16
            SECTION 33/ 16 NOT IN DIRECTORY                    RECORD NUMBER    2685
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=5331, MF=33, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=5331, MF=33, MT=102
            SECTION 33/102 NOT IN DIRECTORY                    RECORD NUMBER    2695
```

- `psyche`   Warnings:

  1. Gamma width not in agreement with PSYCHE's expectations
     FILE 2 / SECTION 151 / ISOTOPE MASS = 129. L = 0 / AT RESONANCE ENERGY 1.60800E+03 EV. THE GAMMA WIDTH 4.80000E-22 DEVIATES TOO MUCH FROM THE AVERAGE 8.67154E-02 (0): Gamma width

```
        FILE  2
          SECTION 151
              ISOTOPE MASS = 129. L =  0
                        AT RESONANCE ENERGY  1.60800E+03 EV. THE GAMMA WIDTH  4.80000E-22 DEVIATES TOO MUCH FROM THE AV
```

- `recent`   Warnings:

  1. Statistical weight of certain L values were incorrect
     0: RRR goof (a)

```
        Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)
        ===============================================================================
        Retrieval Criteria-----------        MAT
        File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)
        Reactions with No Background-    Output (Resonance Contribution)
        ... [609 more lines]
```

- `fudge-4.0`   Warnings:

  1. Missing a channel with a particular angular momenta combination
     resonances / resolved (Error # 1): missingResonanceChannel

```
        WARNING: Missing a channel with angular momenta combination L = 0, J = 2.0 and S = 2.0 for "capture"
        WARNING: Missing a channel with angular momenta combination L = 1, J = 2.0 and S = 2.0 for "capture"
        WARNING: Missing a channel with angular momenta combination L = 1, J = 3.0 and S = 2.0 for "capture"
        WARNING: Missing a channel with angular momenta combination L = 1, J = 3.0 and S = 3.0 for "capture"
                ... plus 1 more instances of this message
```

  2. Cross section does not match sum of linked reaction cross sections
     crossSectionSum label 0: total (Error # 0): CS Sum.

```
        WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.29%
```

  3. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
     Section 0 (n + I129): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
        WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

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4. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 0 (n + I129): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

5. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 1 ((z,n)): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

6. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 2 (n[multiplicity:'2'] + I128): / Form 'eval': (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

7. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (I130 + gamma): / Form 'eval': / Component 0 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

8. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (I130 + gamma): / Form 'eval': / Component 1 (Error # 0): Condition num.

```
WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small
```

- `fudge-4.0` Errors:

  1. The spin statistical weights are off, indicating missing channels
  resonances / resolved / MultiLevel_BreitWigner (Error # 0): badSpinStatisticalWeights

  ```
  WARNING: The spin statical weights for L=1 sums to 2.0, but should sum to 3.0.  You have too few channels for re
  ```

  2. Calculated and tabulated Q values disagree.
  reaction label 20: n[multiplicity:'2'] + I128 (Error # 0): Q mismatch

  ```
  WARNING: Calculated and tabulated Q-values disagree: -8490993.93057251 eV vs -8847090. eV!
  ```

  3. Calculated and tabulated Q values disagree.
  reaction label 21: n[multiplicity:'3'] + I127 (Error # 0): Q mismatch

  ```
  WARNING: Calculated and tabulated Q-values disagree: -15317125.51480103 eV vs -1.56772e7 eV!
  ```

  4. Calculated and tabulated Q values disagree.
  reaction label 22: n + H1 + Te128 (Error # 0): Q mismatch

  ```
  WARNING: Calculated and tabulated Q-values disagree: -6454495.816360474 eV vs -6806330. eV!
  ```

  5. Calculated and tabulated Q values disagree.
  reaction label 23: n + H2 + Te127 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -13012237.92106628 eV vs -1.32796e7 eV!
```

6. Calculated and tabulated Q values disagree.
   reaction label 24: n + H3 + Te126 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -13042846.64779663 eV vs -1.33896e7 eV!
```

7. Calculated and tabulated Q values disagree.
   reaction label 25: I130 + gamma (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 6846081.150512695 eV vs 6463390. eV!
```

8. Calculated and tabulated Q values disagree.
   reaction label 26: n + He4 + Sb125 (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -2327030.86479187 eV vs -2.6749e6 eV!
```

9. Calculated and tabulated Q values disagree.
   reaction label 27: H1 + Te129_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -372087.7091369629 eV vs -715531. eV!
```

10. Calculated and tabulated Q values disagree.
    reaction label 28: H2 + Te128_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -4229929.715423584 eV vs -4496210. eV!
```

11. Calculated and tabulated Q values disagree.
    reaction label 29: H3 + Te127_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: -6755004.980453491 eV vs -7094450. eV!
```

12. Calculated and tabulated Q values disagree.
    reaction label 30: He4 + Sb126_s (Error # 0): Q mismatch

```
WARNING: Calculated and tabulated Q-values disagree: 3887202.279968262 eV vs 3.5512e6 eV!
```

- `njoy2012`   Warnings:

  1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

```
  ---message from conver---cannot do complete particle production for mt= 16
                    only mf4/mf5 provided
```

  2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
     groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

```
  ---message from conver---cannot do complete particle production for mt= 17
                    only mf4/mf5 provided
```

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3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

   ```
   ---message from conver---cannot do complete particle production for mt= 22
                      only mf4/mf5 provided
   ```

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

   ```
   ---message from conver---cannot do complete particle production for mt= 28
                      only mf4/mf5 provided
   ```

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

   ```
   ---message from conver---cannot do complete particle production for mt= 32
                      only mf4/mf5 provided
   ```

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)

   ```
   ---message from conver---cannot do complete particle production for mt= 33
                      only mf4/mf5 provided
   ```

7. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
   groupr...compute self-shielded group-averaged cross-sections (6): GROUPR/conver (0)

   ```
   ---message from conver---cannot do complete particle production for mt= 91
                      only mf4/mf5 provided
   ```

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